

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David J. Lecher on 12/17/2008.

The application has been amended as follows:

In the claims:

**In Claim 1 lines 13-14:** wherein the step of estimating a relationship between placement of the items in a catalog and corresponding user responses comprises a computer that performs the steps of:

**In Claim 26 lines 12-13:** wherein the step of estimating a relationship between placement of the items in a catalog and corresponding user responses comprises a computer that performs the steps of:

**In Claim 27 lines 12-13:** wherein the step of estimating a relationship between placement of the items in a catalog and corresponding user responses comprises a computer that performs the steps of:

### **Prosecution History**

The amendment filed on 9/17/2008 has been entered. The examiner notes that claims 1 and 26-27 are pending for examination and further claims 2-25 have been cancelled in a previous amendment.

The examiner notes claims 1 and 26-27 have been amended via an authorized examiner's amendment and further notes these claims are in condition for allowance for at least the reasons set forth below

### **Reasons for Allowance**

The following is an examiner's statement of reasons for allowance:

The examiner notes the applicant has provided definitions for the following:

**item differentials** are defined as quantified user responses based on the nature of the item (see Applicant's Remarks on 9/17/2008, applicant's numbered page 10).

**search costs** are defined as a quantified effect of placement of items on user responses (see Applicant's Remarks on 9/17/2008, applicant's numbered page 11).

The present invention is directed to a method for automatically designing a catalog for a plurality of items using a computer system based on estimating a relationship between placement of the items in a catalog and corresponding user responses.

The following reference has been identified as the most relevant prior art to the claimed invention. The prior art mostly relates to a method for personalized on-line product presentation.

Abrahams (US 6,985,897 B1) discloses a method for automatically designing a catalog for a plurality of items using a computer system (see at least, abstract), the method comprising the steps of: estimating a relationship between placement of an item in a catalog and corresponding user responses (see at least, col. 3, lines 65-67 and col. 5, lines 1-9: the examiner notes "estimating a relationship" to be recommending a product to a consumer based on the system becoming familiar with the customer), the user responses being obtained from a transaction history (see at least, col. 3, lines 65-67 and col. 4, lines 51-67 and col. 5, lines 1-9: the examiner notes historical purchase data); determining a up-sell or cross-sell for each item using the estimated relationships (see at least, col. 4, lines 51-67).

Abrahams fails to disclose determining an optimized position for each item using the estimated relationships; and forming a catalog with the items being placed at determined optimized positions; deploying a plurality of initial catalogs with different item placements; and obtaining user responses for the initial catalogs, wherein the plurality of initial catalogs refer to any of different catalogs for different groups of users over a same period of time, different catalogs for a same group of users over different periods of time, and a combination of both, wherein said different and same group of users can view only one said different catalogs over a particular period of time, wherein the step of

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estimating a relationship between placement of the items in a catalog and corresponding user responses comprises the steps of: computing item differentials from the user responses; and computing search costs from the user responses, wherein the step of computing item differentials comprises the steps of: computing an effect of the nature of an item on said user responses; and computing an effect of the nature of an item on said user responses for other items in the catalog, wherein the step of computing search costs comprises the steps of: computing an effect of placing an item at a particular position in the catalog on said user responses; and computing an effect of relative positions of items on said user responses, wherein the step of determining an optimized position comprises the steps of: modeling a merchant specified objective as an optimization function in terms of item placement, item differentials, and search costs; and evaluating the optimization function to identify an optimal placement of each item in the catalog.

A person having ordinary skill in the art at the time the invention was made would have not been motivated to combine the limitations/missing features with Abrahams. The examiner notes the combination of missing features and the other limitation(s) found in the independent claim make the invention novel and unobvious over the cited prior art

The examiner was not able to identify any foreign reference to be relevant to the claimed invention

The following reference has been identified as the most relevant non patent literature to the claimed invention. The prior art mostly relates to a personalized recommender system based on web usage mining and decision tree induction

Cho et al. ("A personalized recommender system based on web usage mining and decision tree induction," Expert Systems with Applications 23 (2Q02) 329-342) discloses a variety of data mining techniques such as web usage mining, decision tree induction, association rule mining and the product taxonomy for the evaluation of a methodology for implementing a recommender system using intelligent agent and data warehousing technologies (see at least, abstract).

Cho et al. fails to disclose determining an optimized position for each item using the estimated relationships; and forming a catalog with the items being placed at determined optimized positions; deploying a plurality of initial catalogs with different item placements; and obtaining user responses for the initial catalogs, wherein the plurality of initial catalogs refer to any of different catalogs for different groups of users over a same period of time, different catalogs for a same group of users over different periods of time, and a combination of both, wherein said different and same group of users can view only one said different catalogs over a particular period of time, wherein the step of estimating a relationship between placement of the items in a catalog and

corresponding user responses comprises the steps of: computing item differentials from the user responses; and computing search costs from the user responses, wherein the step of computing item differentials comprises the steps of: computing an effect of the nature of an item on said user responses; and computing an effect of the nature of an item on said user responses for other items in the catalog, wherein the step of computing search costs comprises the steps of: computing an effect of placing an item at a particular position in the catalog on said user responses; and computing an effect of relative positions of items on said user responses, wherein the step of determining an optimized position comprises the steps of: modeling a merchant specified objective as an optimization function in terms of item placement, item differentials, and search costs; and evaluating the optimization function to identify an optimal placement of each item in the catalog.

A person having ordinary skill in the art at the time the invention was made would have not been motivated to combine the limitations/missing features with Cho et al. The examiner notes the combination of missing features and the other limitation(s) found in the independent claim make the invention novel and unobvious over the cited prior art

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asfand M. Sheikh whose telephone number is (571)272-1466. The examiner can normally be reached on 9a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ryan M. Zeender can be reached on (571)272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/20/2008

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